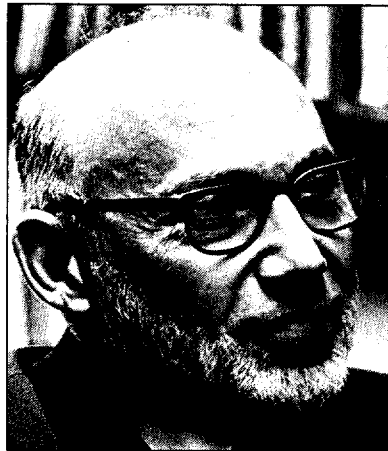


Industrial funding of university research?



Dr. Lederberg, why do you favor industrial funding of university research programs?

Industry is a source of funds that enables research to go on at a time when the pace and growth of government funding for research doesn't begin to match the talent that is available to do good work. The most useful relationships are those in which industry has an important technical input to make from its own perspective, resources, and concern for research applications that can be complementary to what goes on in the basic science arena.

We need efficient and carefully constructed new technologies to cope with the needs of an ever-growing world population and to mitigate the problems generated by existing technologies. We need to bring together the best creative effort possible to solve these kinds of problems.

How do you answer criticism that academic-industrial funding agreements threaten a university's academic freedom?

They impinge on it. Threaten is probably too-alarmist a word. However, this certainly could get out of hand. Academic freedom is only one of many goods that have to be preserved. If we approach the matter with some care and open-mindedness, there is no more reason to fear impingements on academic freedom from industrial support than there is to fear them from government support.

These agreements have to be very carefully drawn and

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Dr. Joshua Lederberg
President, Rockefeller Univ.

structured, and the entire enterprise kept at some reasonable level. When industrial support is 5 to 10% of the support total, it is in good balance with other sources of support. The important thing is that institutions need to have a way of obtaining their own unrestricted funding in sufficient measure to give them freedom to make choices.

University-industry funding agreements have fostered concern that they have a detrimental effect on the types of research that universities conduct on their campuses. Do they?

They could have, but so could other sources of funding. It is the job of the university to control that. It is part of the judgment process involved in making these contracts.

Is it true that these types of agreements can significantly alter the delicate balance of funding within a department?

Some people would say that they wish it would! Yes, but marginally, and no more than a lot of other influences. What is one person's problem is another person's joy in terms of the resources available to do research. But this is not a new problem.

As long as the system is kept fairly open, pluralistic, and as long as there are many different elements involved, there is relatively little danger of the balance getting out of hand. The danger will arise if other sources of funding should dry up further than they have. Then that would leave the universities at the mercy of specialized interests.

Do you foresee these funding agreements altering basic research philosophies?

In some measure. No more or less

than Federal funding will have done, and probably less because I don't see industrial funding operating at anything like the scale of government funding. As certain areas of technology mature, they are going to be developed in house. It is the rising frontier areas where there is a need for industry-university interaction. From a company standpoint, universities can be quite problematical sources of innovation.

Have you encountered any specific problems in dealing with industry?

The legal departments of many companies are absolutely uninformed. They have no prior experience dealing with universities and find them to be strange creatures. The legal departments need to develop a craft to handle these agreements.

As we have gained experience, we have developed some standardized instruments that have the essential features in them and make it a little easier the second time around. Groups such as the Association of American Universities and the Council for Chemical Research have been helpful in organizing and drafting standardized instruments. Legal technicalities have been something of a headache.

We have had no companies where there was a fundamental philosophic problem with the CEO, but lower-level management personnel take time to educate.

Do you foresee a majority or possibly all of the university research being industrially funded?

Not at all. I'll be amazed if it exceeds 10%. It's not in the cards in terms of what industry's needs and relationships are. That's predicated on there being a large social investment in research.

Business can do a good thing by funding research in areas where it has a specialized need not met by its existing research establishments. There is a myth about the extent to which industry is going to support university research. It may be wishful thinking on the part of people who are finding it tougher to get government money.

American industry absolutely needs the kind of spark and innovation that can only come from the universities. These few sparks are a creative opportunity. The mainstream of organized, mission-oriented research will and should remain in industrial laboratories—and there are sparks there too. □